

WHAT IS CLAIMED IS:

- 1 1. A method for synchronizing operations in a computer environment with  
2 accompanying audio, said method comprising:  
3                   replaying said operations and said accompanying audio in said  
4 computer environment, said operations resulting from processing of recorded user  
5 inputs;  
6                   creating a synchronization point at a common point in said replaying  
7 of said operations and said accompanying audio; and  
8                   associating said synchronization point with said accompanying audio,  
9 said synchronization point providing a reference point to substantially synchronize  
10 said accompanying audio when said operations are replayed in a replay computer  
11 environment using said recorded user inputs.
  
- 1 2. The method of claim 1 wherein said creating of said synchronization point  
2 includes creating said synchronization point in response to a user command.
  
- 1 3. The method of claim 1 wherein said common point is at a point in time where  
2 there is no audio output during said replaying of said accompanying audio.
  
- 1 4. The method of claim 1 further comprising obtaining a current time value  
2 associated with said processing of said recorded user inputs, said current time value  
3 corresponding to said synchronization point.
  
- 1 5. The method of claim 1 further comprising saving said synchronization point  
2 in a first file containing said accompanying audio, said first file being different than a  
3 second file containing said recorded user inputs.

1 6. The method of claim 1 further comprising changing a time value of said  
2 synchronization point in response to a positional change of a marker of said  
3 synchronization point in a timeline.

1 7. The method of claim 1 further comprising:  
2 detecting said synchronization point during a subsequent replay of said  
3 operations and said accompanying audio in said replay computer environment, said  
4 subsequent replay involving another processing of said recorded user inputs;  
5 comparing said synchronization point with a time value associated  
6 with said another processing of said recorded user inputs; and  
7 selectively pausing said subsequent replay of said accompanying audio  
8 if a difference between said synchronization point and said time value exceeds a  
9 predefined amount so that said subsequent replay of said operations can catch up to  
10 said accompanying audio.

1 8. The method of claim 7 further comprising resuming said subsequent replay of  
2 said accompanying audio if a difference between said synchronization point and a  
3 current time value exceeds a second predefined amount, said current time value being  
4 associated with said another processing of said recorded user inputs.

1 9. The method of claim 8 wherein said second predefined amount equals said  
2 predefined amount.

- 1    10.    A method for synchronizing operations in a computer environment with  
2    accompanying audio, said method comprising:  
3                replaying said operations in said computer environment, including  
4    replaying said accompanying audio, said operations resulting from processing of  
5    recorded user inputs;  
6                detecting a synchronization point during said replaying of said  
7    accompanying audio;  
8                comparing said synchronization point with a time value associated  
9    with said processing of said recorded user inputs; and  
10               selectively pausing said replaying of said accompanying audio if a  
11   difference between said synchronization point and said time value exceeds a  
12   predefined amount so that said replaying of said operations can catch up to said  
13   accompanying audio.
- 1    11.    The method of claim 10 further comprising resuming said replaying of said  
2    accompanying audio if a difference between said synchronization point and a current  
3    time value exceeds a second predefined amount, said current time value being  
4    associated with said processing of said recorded user inputs.
- 1    12.    The method of claim 11 wherein said second predefined amount equals said  
2    predefined amount.
- 1    13.    The method of claim 10 further comprising displaying said synchronization  
2    point as a marker on a timeline, said timeline including time values extracted from  
3    said recorded user inputs.
- 1    14.    The method of claim 10 further comprising:  
2                creating said synchronization point at a common point in a replay of  
3    said operations and said accompanying audio; and  
4                associating said synchronization point with said accompanying audio.

1 15. The method of claim 14 wherein said creating of said synchronization point  
2 includes creating said synchronization point in response to a user command.

1 16. The method of claim 14 wherein said common point is at a point in time  
2 where there is no audio output of said accompanying audio.

1 17. The method of claim 14 further comprising saving said synchronization point  
2 in a first file containing said accompanying audio, said first file being different than a  
3 second file containing said recorded user inputs.

1 18. The method of claim 14 further comprising changing a time value of said  
2 synchronization point in response to a positional change of a marker of said  
3 synchronization point in a timeline.

1 19. A storage medium readable by a computer, tangibly embodying a program of  
2 instructions executable by said computer to perform method steps for synchronizing  
3 operations in a computer environment with accompanying audio, said method  
4 comprising:

5                   replaying said operations and said accompanying audio in said  
6 computer environment, said operations resulting from processing of recorded user  
7 inputs;

8                   creating a synchronization point at a common point in said replaying  
9 of said operations and said accompanying audio; and

10                  associating said synchronization point with said accompanying audio,  
11 said synchronization point providing a reference point to substantially synchronize  
12 said accompanying audio when said operations are replayed in a replay computer  
13 environment using said recorded user inputs.

1 20. The storage medium of claim 19 wherein said creating of said synchronization  
2 point includes creating said synchronization point in response to a user command.

1 21. The storage medium of claim 19 wherein said common point is at a point in  
2 time where there is no audio output during said replaying of said accompanying  
3 audio.

1 22. The storage medium of claim 19, wherein said method further comprises  
2 obtaining a current time value associated with said processing of said recorded user  
3 inputs, said current time value corresponding to said synchronization point.

1 23. The storage medium of claim 19, wherein said method further comprises  
2 saving said synchronization point in a first file containing said accompanying audio,  
3 said first file being different than a second file containing said recorded user inputs.

1 24. The storage medium of claim 19, wherein said method further comprises  
2 changing a time value of said synchronization point in response to a positional change  
3 of a marker of said synchronization point in a timeline.

1 25. The storage medium of claim 19, wherein said method further comprises:  
2 detecting said synchronization point during a subsequent replay of said  
3 operations and said accompanying audio in said replay computer environment, said  
4 subsequent replay involving another processing of said recorded user inputs;  
5 comparing said synchronization point with a time value associated  
6 with said another processing of said recorded user inputs; and  
7 selectively pausing said subsequent replay of said accompanying audio  
8 if a difference between said synchronization point and said time value exceeds a  
9 predefined amount so that said subsequent replay of said operations can catch up to  
10 said accompanying audio.

1 26. The storage medium of claim 25, wherein said method further comprises  
2 resuming said subsequent replay of said accompanying audio if a difference between  
3 said synchronization point and a current time value exceeds a second predefined  
4 amount, said current time value being associated with said another processing of said  
5 recorded user inputs.

1 27. The storage medium of claim 26 wherein said second predefined amount  
2 equals said predefined amount.

1 28. A storage medium readable by a computer, tangibly embodying a program of  
2 instructions executable by said computer to perform method steps for synchronizing  
3 operations in a computer environment with accompanying audio, said method  
4 comprising:

5           replaying said operations in said computer environment, including  
6 replaying said accompanying audio, said operations resulting from processing of  
7 recorded user inputs;

8           detecting a synchronization point during said replaying of said  
9 accompanying audio;

10           comparing said synchronization point with a time value associated  
11 with said processing of said recorded user inputs; and

12           selectively pausing said replaying of said accompanying audio if a  
13 difference between said synchronization point and said time value exceeds a  
14 predefined amount so that said replaying of said operations can catch up to said  
15 accompanying audio.

1 29. The storage medium of claim 28, wherein said method further comprises  
2 resuming said replaying of said accompanying audio if a difference between said  
3 synchronization point and a current time value exceeds a second predefined amount,  
4 said current time value being associated with said processing of said recorded user  
5 inputs.

1 30. The storage medium of claim 29 wherein said second predefined amount  
2 equals said predefined amount.

1 31. The storage medium of claim 28 further comprising displaying said  
2 synchronization point as a marker on a timeline, said timeline including time values  
3 extracted from said recorded user inputs.

1 32. The storage medium of claim 28 wherein said method further comprises:  
2 creating said synchronization point at a common point in a replay of  
3 said operations and said accompanying audio; and  
4 associating said synchronization point with said accompanying audio.

1 33. The storage medium of claim 32 wherein said method further comprises  
2 wherein said creating of said synchronization point includes creating said  
3 synchronization point in response to a user command.

1 34. The storage medium of claim 32 wherein said common point is at a point in  
2 time where there is no audio output of said accompanying audio.

1  
2 35. The storage medium of claim 32 further comprising saving said  
3 synchronization point in a first file containing said accompanying audio, said first file  
4 being different than a second file containing said recorded user inputs.

1 36. The storage medium of claim 32 further comprising changing a time value of  
2 said synchronization point in response to a positional change of a marker of said  
3 synchronization point in a timeline.